

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Original) A process for producing an [[An]] organic semiconductor material having rodlike low-molecular liquid crystallinity, comprising: a skeleton structure comprising L 6 π electron aromatic rings, M 10 π electron aromatic rings, and N 14 π electron aromatic rings, wherein L, M, and N are each an integer of 0 (zero) to 4 and L + M + N = 1 to 4; and a terminal structure attached to both ends of said skeleton structure, said terminal structure being capable of developing liquid crystallinity, said process comprising:

repeatedly purifying the organic semiconductor material to remove impurities such that the phase angle θ of impedance of said organic semiconductor material being is $-80^\circ \leq \theta \leq -90^\circ$ as determined in the measurement of impedance in a frequency f range of $100 \text{ Hz} \leq f \leq 1 \text{ MHz}$ in such a state that said organic semiconductor material in an isotropic phase state is held between a pair of opposed substrates with an interelectrode spacing of 9 μm.

2. (Original) An organic semiconductor element comprising a functional layer comprising said an organic semiconductor material produced by the process according to claim 1, wherein

said the functional layer having has been formed by heating said organic semiconductor material to a temperature high enough for the organic semiconductor

material to exhibit at least a smectic phase and then cooling the organic semiconductor material, and

at least a part of said the organic semiconductor material being is in a crystal phase.

3. (Original) An organic semiconductor element comprising a functional layer comprising said an organic semiconductor material produced by the process according to claim 1, wherein

said the organic semiconductor material exhibiting exhibits a smectic phase.